

Amendments to the Claims

Please cancel Claims 54-58 and 62-67 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 59-61 and 68-73 to read as follows.

Claims 1-58 (cancelled)

59. (Currently amended) A printing apparatus using a cartridge that contains a recording material and is provided with a non-volatile memory unit, said printing apparatus comprising:

an interface, adapted for inputting print data sent from a host computer;

a printer controller, adapted for rendering the print data input via said interface;

an engine controller, adapted for controlling a printer engine that records on a recording medium based on the print data rendered by said printer controller, performing bi-directional communication with said printer controller and the non-volatile memory unit, and controlling the non-volatile memory unit to store time information regarding a time on which the cartridge was used; and

a warning means unit, controlled by said printer controller, adapted for providing a first warning in response to a remaining amount of the recording material becoming low; low,

~~control means for controlling the non-volatile memory unit to store time information on a time on which the cartridge was first used; and~~

~~calculation means for calculating a lifetime of the cartridge based on the time information stored in the non-volatile memory unit;~~

~~wherein said warning means provides the warning based on the lifetime of the cartridge calculated by said calculation means printer controller reads the time information stored in the non-volatile memory unit via said engine controller and controls said warning unit to provide a second warning based on the read time information.~~

60. (Currently amended) An apparatus according to Claim 59, wherein said warning ~~means~~ unit provides at least one of the first and second warnings ~~warning~~ on a display screen of a monitor connected to a the host computer.

61. (Currently amended) An apparatus according to Claim 59, wherein said warning ~~means~~ unit provides at least one of the first and second warnings ~~warning~~ on a display unit of said apparatus.

Claims 62-67 (cancelled)

68. (Currently amended) A cartridge mounted in a printing apparatus that communicates with a host computer, wherein the printing apparatus comprises:
an interface, adapted for inputting print data sent from the host computer;

a printer controller, adapted for rendering the print data input via the interface;

a warning means unit, controlled by the printer controller, adapted for providing a first warning in response to a remaining amount of a recording material contained in said cartridge becoming low; and

an engine controller, adapted for controlling a printer engine that records on a recording medium based on the print data rendered by the printer controller, performing bi-directional communication with the printer controller and a non-volatile memory unit provided in said cartridge, and controlling the non-volatile memory unit to store time information regarding a time on which said cartridge was used,

wherein the printer controller reads the time information stored in the non-volatile memory unit via the engine controller and controls the warning unit to provide a second warning based on the read time information, and

~~control means for controlling said cartridge to store time information on a time on which said cartridge was first mounted in the printing apparatus; and~~

~~calculation means for calculating a lifetime of said cartridge based on the time information stored in said cartridge;~~

~~wherein the warning means provides the warning based on the lifetime of said cartridge calculated by the calculation means; and~~

wherein said cartridge comprises:

~~containing means~~ a container, adapted for containing the recording material;

and

~~non-volatile memory means for storing the time information~~ material.

69. (Currently amended) A cartridge according to Claim 68, wherein the warning ~~means~~ unit provides at least one of the first and second warnings ~~warning~~ on a display screen of a monitor connected to a the host computer.

70. (Currently amended) A cartridge according to Claim 68, wherein the warning ~~means~~ unit provides at least one of the first and second warnings ~~warning~~ on a display unit of the printing apparatus.

71. (Currently amended) A memory device provided in a cartridge that contains a recording material and is mounted in a printing apparatus that communicates with a host computer, wherein the printing apparatus comprises:

an interface, adapted for inputting print data sent from the host computer;

a printer controller, adapted for rendering the print data input via the interface;

a warning means unit, controlled by the printer controller, adapted for providing a first warning in response to a remaining amount of the recording material becoming low; and

an engine controller, adapted for controlling a printer engine that records on a recording medium based on the print data rendered by the printer controller, performing bi-directional communication with the printer controller and said memory device, and

controlling said memory device to store time information regarding a time on which the cartridge was used,

wherein the printer controller reads the time information stored in said memory device via the engine controller and controls the warning unit to provide a second warning based on the read time information, and

~~control means for controlling said memory device to store time information on a time on which the cartridge was first mounted in the printing apparatus; and~~

~~calculation means for calculating a lifetime of the cartridge based on the time information stored in said memory device;~~

~~wherein the warning means provides the warning based on the lifetime of the cartridge calculated by the calculation means; and~~

wherein said memory device comprises:

a non-volatile memory means unit, adapted for storing the time information;

and

an accepting means unit, adapted for accepting a request for access to said non-volatile memory ~~means unit~~ from the ~~control means printer controller~~.

72. (Currently amended) A memory device according to Claim 71, wherein the warning ~~means unit~~ provides at least one of the first and second warnings warning on a display screen of a monitor connected to a the host computer.

73. (Currently amended) A memory device according to Claim 71, wherein the warning ~~means~~ unit provides at least one of the first and second warnings ~~warning~~ on a display unit of the printing apparatus.